

Flightfax


ARMY AVIATION
RISK-MANAGEMENT
INFORMATION

JULY 1999 ♦ VOL 27 ♦ NO 7

<http://safety.army.mil>

DISTRIBUTION STATEMENT A
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19990621 136



As we celebrate the birth of our nation
and remember those who have sacrificed,
let us not forget those who are in the
process of writing tomorrow's history.

Happy Independence Day
to all soldiers,
wherever you are.



Welcome to hell

"Please, God, don't let them find my pliers."

I couldn't sleep or eat. The guilt burned in me like acid. I still hadn't mustered the courage to admit that I was missing a tool from my work center.



It seems incredible that I let a pair of missing safety-wire pliers go without reporting them, but I was scared. I'm sure now that threats concerning tool loss were directed at people who didn't follow SOP for tool control, but that's not how I took it. I didn't want to get hammered for losing a tool.

I'd been in my new command for about 6 months, and tool control was lax compared to my last duty station. I thought I could help, so I volunteered to be tool-control petty officer (PO) for airframes.

Upon our return to the hangar after finishing up an at-sea period, I dutifully inventoried our tools and found that a pair of safety-wire pliers was missing from a tool pouch. I told my supervisor; he replied that we'd left a pair on the boat with our troubleshooter. I was uncomfortable with the answer, but, being a brand-new PO2 with all of 3 years' experience, compared to my supervisor's 17, I figured he knew best. He went on leave, and I anxiously awaited the boat's return.

When a tall, lanky metalsmith walked in with his gear, I yanked the troubleshooter's pouch out of his hand. A cold shiver streaked down my back when I didn't find the extra safety-wire pliers he was supposed to have. Questioning him yielded nothing but a dumb look.

I called my supervisor at home, but he'd already left town. I knew I had to tell maintenance control, but the master chief had just

told us that the next person who reported a missing tool was going to see the old man—not exactly the kind of encouragement I needed. I went through the shop with a fine-tooth comb looking for those pliers; I came up empty-handed again and again.

I didn't sleep that night. I even discussed the problem with my wife. She convinced me to come clean and take my lumps. The situation obviously wasn't going to fix itself, and the potential consequences were too risky to ignore.

The 10-mile trip to work took forever. It was a crisp, fall day with the sun shining brightly, but I made the trek from the parking lot filled with dread. With the first few steps into the hangar, I heard the chaos and excitement associated with something big. One of my coworkers dashed past me exclaiming, "The Skipper had to bail out; his flight controls jammed. Uncontrolled roll!"

Time compression made him sound like a bad eight-track tape. I prayed that the aircraft had crashed without hitting a hospital or a school and that it had burned and disintegrated.

"Please, God, don't let them find my pliers."

Three days later, I was walking up the stairs to admin when I heard a slow, shuffling sound ahead of me. Looking up, I stared straight into the eyes of my CO. Ejecting at more than 400 knots at 30,000 feet with his visor up hadn't helped his complexion. His face was a sickly montage of purple, green, blue, black, and yellow from the wind stream hitting him. He was stiff and sore from the rocket ride, and he moved with slow, deliberate steps. He sniffled and was kind enough to ask me how I was doing. I wanted to scream out, "How am I

doing? My God, I almost killed you!" But I didn't. We exchanged small talk, and then I excused myself to go vomit.

That chance encounter was bad enough, but the clincher came when I took my wife to a predeployment briefing for dependents. I guess it was divine chance that the CO's wife sat next to me. The skipper's face had lost most of its grotesque hues, but he was still plenty sore. He addressed the audience and made a wisecrack about being "glad to be here—literally!" The crowd laughed politely, and I glanced over to see his wife's reaction. She sat there with a broad smile, arms wrapped around their two young daughters—tears streaming down her face. The chilling realization that we could have been attending his funeral sickened me once more.

The aircraft had landed in a Georgia swamp. The investigation attributed the mishap to a burst hydraulic line.

The safety-wire pliers? Our berthing PO returned from the ship and handed them to me. He had walked into the shop while everything was being packed up for the off-load and just grabbed them to go hang bunk curtains! To the best of my knowledge, no one ever knew what happened except me.

Tool control has gone through a lot of refinement since that awful incident. I realize now that I misinterpreted the master chief's warnings about missing tools. No one should be threatened with punishment for losing tools, but maintainers need to understand how deadly important those procedures are.

—adapted from an article by AMCS(AW)
Keith Dennis in *Mech*

When things don't seem right

Pay attention to feelings of uncertainty; when something doesn't fit, stop and heed.

I recently had a experience that retaught a lesson I've learned several times before. Some of us are stubborn, I guess, or maybe it's just that we need recurrent training from time to time.

Under visual flight rules, I was knocking around the airport under a 1200-foot ceiling, giving my father his first ride in my airplane. The visibility below the clouds was good, but I don't like venturing too far in marginal VFR, so we stayed within a few miles of the airport. Then it occurred to me that I could make the flight more interesting—and productive—by asking approach control for a clearance to a nearby VOR and a practice instrument approach back to the airport. I tuned the frequency and made my request.

"Beechcraft One-Two Yankee is over Cleveland [Texas]. Traffic permitting, we'd like clearance to Daisetta, and then a VOR Alpha approach back to Cleveland."

Approach control wasn't busy, so the controller gave me a heading to fly and an altitude to maintain. He also told me to expect vectors to the final approach course.

To understand what happened next, you must picture the local geography.

Daisetta VOR provides instrument approaches to two local airports. Cleveland Airport is west-northwest of the VOR; the approach uses the 291-degree radial, and it's 21 miles from the VOR to the airport. Liberty

Airport is 7.4 miles south of the VOR on the 195-degree radial; it, too, is a VOR Alpha approach.

The initial heading I received was somewhat north of a direct line to the Daisetta VOR. This made sense because the controller obviously needed some room to turn me back to intercept the approach. I was mentally prepared for a right turn to join the final approach course.

After reaching my assigned altitude of 2000 feet and flying for several minutes on the assigned heading, approach control gave me the approach clearance.

"Beechcraft One-Two Yankee, turn right, heading one-seven-zero, maintain two thousand until established on the approach, cleared VOR Alpha approach."

Had this been almost any other instrument approach, I would have refused the clearance immediately. Fly a heading of 170 degrees to intercept a final approach course of 295 degrees? A 125-degree intercept angle? No way! As it was, I knew the area well, knew the ceiling was well above minimums, and knew that the missed approach fix was 22 miles out—plenty of room to get myself established on the radial. Not wanting to accuse the controller of giving me a lousy intercept, I figured I'd just work it out. I read back the intercept instructions, finishing with "...cleared for the VOR Alpha approach."

Because I knew what to expect and was ready, the intercept wasn't too difficult. As the VOR needle centered outbound, and I was congratulating myself on doing a fine job of salvaging a difficult situation, ATC called again.

"One-Two Yankee, are you doing a procedure turn?"

... when a controller has to ask a question like this, someone has screwed up.

I immediately tensed up. In my experience, when a controller has to ask a question like this, someone has screwed up. I quickly verified the VOR frequency and radial before answering. All was as it should be.

"One-Two Yankee, I show myself established on the two-ninety-five-degree radial. And, Sir, this approach doesn't have a procedure turn."

"Ah, roger," the controller said, sounding a bit confused. Then, after a couple of seconds, he said, "One-Two Yankee, are you doing the approach to Cleveland?" I answered in the affirmative.

"Sir, I cleared you for the VOR Alpha approach to Liberty! You are now cleared for the VOR Alpha approach to Cleveland."

Because I'd never mentioned Liberty when I called ATC, it never entered my mind that my clearance limit might be any airport other than my home base. The controller had apparently stated Liberty in the approach clearance, but it didn't register because I didn't perceive any need to verify the destination. I stopped listening after I heard "...VOR Alpha approach...."

When I read back the clearance, I read back everything except the airport name, eliminating any chance the controller had to catch the error. Confusing my request was the controller's mistake initially, but not catching the new clearance limit and not reading back the full clearance made it my mistake. It's called failure to comply with an ATC clearance.

What's the lesson I relearned—and experienced I don't know how many times before? Simple. In aviation, especially when

communicating with ATC, when something doesn't sound right, it probably isn't.

As I think back over my flying career, I can remember many times when things just haven't seemed right. Sometimes a clearance or cockpit indication wasn't what I was used to seeing. Other times, I just had an uneasy feeling about something without being able to put my finger on exactly what was bothering me. Most of the time when I felt this way, my vague uneasiness was justified because something was indeed wrong. A couple of times when I ignored the warning bells in my head, bad things happened. Call it intuition, a sixth sense, or your guardian angel; the lesson is to stop and pay heed when something doesn't seem to fit.

On this flight, the intercept angle just wasn't reasonable. At the time, I passed it off as sloppy controlling. Yet I know that controllers generally do a darn good job. Even a rookie wouldn't be likely to botch a vector to the final that badly. The warning bells were there; I just ignored them.

What could I have done to heed them? It hadn't occurred to me that another airport was involved, so I wouldn't have thought to verify which approach I was cleared for. But plain English is always available when standard phraseology doesn't exist. How about, "Approach, that's more than a ninety-degree intercept. Verify heading one-seven-zero?"

It may have taken a second for the controller to figure it out, but the same process—questioning things that don't sound right—also works from his perspective. "Why is this guy saying it's a ninety-degree intercept when it's

really only twenty degrees?" Between the two of us, we would have figured it out.

This particular error could have been avoided in another way. Throughout my IFR career, I've recognized that understanding approach clearances is critical to safety, so I've always read back each element of the approach clearance—except for the airport name. The destination never struck me as ambiguous, so it seemed unnecessary to state it. Controllers always state it, though. Now I know why, and now I always read it back, too.

What other events have taught me this lesson? There have been several, but I'll mention two. There was my canceled IFR-to-Newark-Approach-Control flight, when the controller responded with my call sign and the word "Roger." Yes, I knew that they usually say "Cancellation received, squawk one-two-zero-zero, frequency change approved."

The controller sounded very busy, so I convinced myself that he probably didn't have time to utter the standard phraseology. I dismissed my doubts and went off frequency. The result was to be met at my destination by an FAA inspector. Although the ATC tapes eventually proved that I had indeed canceled my flight plan, I still got an unpleasant ramp-check out of it.

Then there was the time the prop-governor check on runup seemed just a little strange. I ignored it, and 3 hours later I found out what runaway props are all about.

Remember, when that little voice says something's not right, LISTEN!

—adapted from an article by Robert I. Snow in *Flight Training*, Feb 98



The Army Aviation Broken Wing Award recognizes aircrewmembers who demonstrate a high degree of professional skill while recovering an aircraft from an inflight failure or malfunction requiring an emergency landing. Requirements for the award are in AR 672-74: *Army Accident Prevention Awards*.

■ **CPT Richard Q. Carrol**
 ■ **CPT James H. Fraser**

*Aviation Training Brigade
 Fort Rucker, AL*

CPT Fraser was PC and CPT Carrol was PI of a UH-1H providing flight following for student NOE training at night. CPT Fraser was on the controls after temporarily breaking station to refuel when the crew heard a fizzing sound coming from the rear of the aircraft. Immediately thereafter, the aircraft yawed, followed by illumination of the master caution and hydraulic pressure caution lights. Simultaneously, the cyclic slammed to the right forward quadrant, causing a violent pitch-down and right roll of the aircraft.

CPT Fraser attempted to center the cyclic with both hands, gaining a somewhat level attitude, and called out the emergency procedure. CPT Carrol completed the first three steps with no effect. At CPT Fraser's direction, CPT Carrol put both hands and both

legs around the cyclic to prevent the aircraft from pitching further right and forward, possibly becoming inverted. The two crewmembers completed the emergency procedure with no change in aircraft response. At this time, the aircraft was at 3000 feet and about 10 miles from the airport.

Moments later on short final, when CPT Fraser was forced to move one hand to the collective to make the landing, the cyclic surged forward with increased pressure to the right forward quadrant. After helping CPT Carrol regain control, he was able to make an input on the collective control. He then elected to use airspeed to descend and land, as the pressure needed to maintain the cyclic in a landing position would not allow either crewmember to release it.

The aircraft touched down at greater than ETL, and CPT Fraser maintained directional alignment through use of the pedals. He reduced ground-speed after touchdown by reducing engine rpm, and the aircraft came to a stop without damage or injury. Postflight inspection revealed that all hydraulic fluid had sprayed out of a burst hydraulic line.

Time from onset of the emergency to landing was 12 minutes

■ **CW2 David W. Elsberry**
 ■ **CW2 Steven D. Swenson**
*1-183d Aviation (Attack Helicopter),
 1D ARNG, Boise, ID*

CW2 Swenson was pilot in command, and CW2 Elsberry was pilot of an AH-64A performing aerial gunnery in a desert environment. While at a 150-foot hover with hover hold engaged and velocity vector solid and centered, the aircraft began making sudden violent uncommanded forward nose-down, tail-up movements. CW2

Elsberry made a mayday call as CW2 Swenson applied full aft cyclic with no effect. After about 2 seconds, the PC gained cyclic control for about 1/2-second, then the aircraft pitched up. As the PC continued to fight for control of the aircraft, CW2 Elsberry called out instrument readings. An instrument check showed no caution lights, and the DASE was engaged. The PC disengaged the DASE as the aircraft made a violent uncommanded roll to the right and up. He then applied full left forward cyclic with no effect. Disengagement of DASE had no apparent effect. After 3 to 4 seconds, CW2 Swenson gained 1/2-second of cyclic control, and the aircraft rolled back to the left. He initiated a descent in an attempt to land, and during descent, the aircraft made several violent uncommanded movements with no cyclic effect and complete loss of control. Every 3 to 4 seconds, CW2 Swenson attempted to coordinate and time cyclic inputs to keep the aircraft at near-level attitude prior to impact.

At 15 to 20 feet agl, the aircraft was in a very nose-low, left-low attitude. Just before ground impact, CW2 Swenson bottomed collective and rotor system appeared level. When he started the APU, uncommanded rotor movements again began, so he initiated emergency engine shutdown and engaged rotor brake. As the rotor wound down, it pitched down and came very close to the PNVIS unit. The rotor head made loud popping noises as it turned and came to a stop. The servos and control head continued to move after shutdown with generators and APU off, and the CPG attitude indicator and RMI spun uncontrollably.

Time from onset of the emergency to landing without damage or injury was 1 minute.

■ **CW2 Rollin E. Knifley**

*Army Aviation Support Facility,
KY ARNG, Frankfort, KY*

CW2 Knifley was pilot-in-command of a UH-60 as it departed on an IFR clearance for the third leg of a cross-country ferry flight. About 5 minutes after leveling off at altitude, the crew heard a loud grinding noise from the vicinity of the right engine. The noise stopped after 5 to 7 seconds, but was followed by an explosion. The low-rotor warning horn immediately activated, followed by loss of Nr signal. In addition, the No. 2 hydraulic pump, main transmission oil pressure, right chip input module, chip main module sump, No. 2 main generator caution, and backup pump advisory lights illuminated. All this was followed by transmission pressure falling to zero psi.

The copilot, who was on the controls, lowered collective to full down while adjusting airspeed for autorotational descent. CW2 Knifley retarded the No. 2 power-control lever (PCL), set the transponder to emergency, and made the call on UHF guard frequency that the aircraft was in emergency descent due to transmission problems. He made a conscious decision to keep the copilot on the controls rather than transfer controls at that time. He directed the copilot to make a right turn toward a nearby airport and provided airspeed and altitude information to the copilot. As the aircraft transitioned through the 5000-foot-broken cloud layer, the copilot made visual contact with the airfield. Due to loss of transmission oil pressure, the autorotational descent was continued to keep the rotor aerodynamically loaded because of concern that the main transmission might seize. As the copilot continued to maneuver the aircraft through the

clouds, CW2 Knifley directed airspeed adjustments to ensure reaching the runway.

Throughout the descent, the lack of Nr signal prevented the low-rotor audio warning horn from being deactivated, creating the potential for distraction in the cockpit. However, CW2 Knifley overcame this by continuous communication with the crew and proper division of flying duties.

CW2 Knifley assisted in maintaining rotor rpm awareness by visual observation of the tip path plane, comparison of rotor and engine noises, and by "feel" for the aircraft. Upon reaching 2000 feet at a rate of descent of 3000 fpm, the copilot maneuvered the aircraft for landing. As the aircraft descended through 500 feet, CW2 Knifley called out airspeed and radar altimeter readings to the copilot and directed the crew to prepare for a touch-down autorotation, not knowing whether or not the main transmission would respond to engine input when power was applied.

As the aircraft reached 100 feet agl, a cyclic flare was initiated, followed by collective cushion. The aircraft touched down with approximately 30 knots forward airspeed, and a roll-on landing was completed with no damage to the aircraft or injuries to the crew. CW2 Knifley performed an emergency shutdown on both engines, and the crew exited the aircraft.

The crew's postflight inspection revealed catastrophic failure of the right input module, loss of all transmission oil, and additional damage to the airframe and main-rotor system due to exploding debris from the input module.

Time from onset of the emergency to landing without damage or injury was approximately 3 minutes.

Note: The copilot, CW2 Gerald A. Carroll, also received the Broken Wing Award for his performance during this emergency [see Apr 98 *Flightfax*].

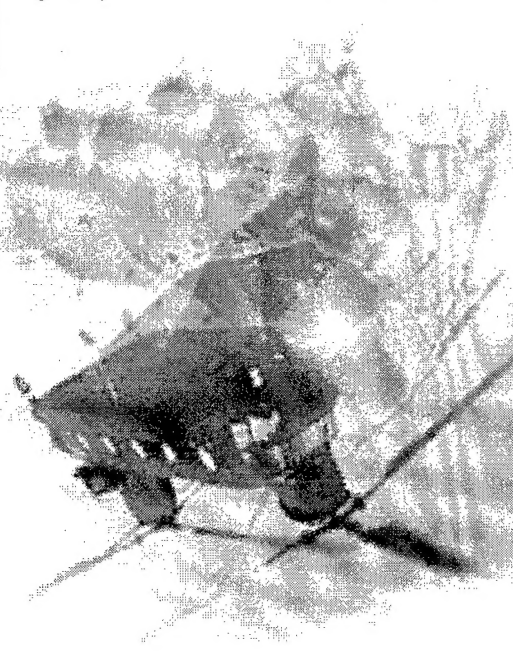
■ **CW3 Bric A. Lewis**

■ **CW2 Patrick O. Nield**

*F Company, 158th Aviation Regiment
New Century, KS*

CW3 Lewis was flying from the Cright seat of the CH-47D, and CW2 Nield was manning the radios and navigating when the aircraft suddenly pitched nose down, followed by a rapid left yaw. CW3 Lewis' application of aft cyclic and right pedal seemed to have some effect, but the yaw could not be stopped with full right pedal. CW2 Nield placed his hands on the glare shield to prevent interference with the controls and scanned the master caution panel for an indication of the problem. Seeing no evidence of emergency or caution lights, both pilots assumed they had an advanced flight control system (AFCS) failure.

Not responding to flight control inputs, the aircraft continued its violent and uncommanded movements, making it impossible for the crew to initiate emergency procedures. CW3 Lewis attempted to reestablish aircraft control; however, as the aircraft increased its left yaw, it began to roll left as well. CW3 Lewis tried to apply right cyclic to correct the roll but



found the cyclic to be unmovable. He advised CW2 Nield that he needed assistance on the flight controls.

Despite both pilots' best efforts, the aircraft rolled left to an inverted position. It was at 1100 to 1300 feet agl and falling fast. The pilots increased their furious attempts to regain control of the aircraft as it continued its upside-down descent.

At approximately 300 feet agl, the aircraft snap-rolled upright, but it remained in a steep dive. At 250 feet, as CW3 Lewis was pulling aft on the cyclic, CW2 Nield noted that the airspeed indicated zero, but the aircraft was moving extremely fast. Both pilots began to feel weight in their seats as they saw the nose of the aircraft starting to come up. CW3 Lewis quickly glanced at the rotor rpm as it was decreasing through 115 percent, and the radar altimeter indicated 97 feet. The aircraft was now in a 20- to 30-degree climb and dissipating airspeed rapidly.

With both pilots pushing forward on the cyclic, the controls began to respond partially, and the aircraft began to level off. It still wanted to yaw left, so both pilots had to apply full right pedal. The aircraft was still approaching the ground rapidly, and CW3 Lewis attempted to stop the descent by applying full thrust, but the thrust control (collective) would move up only slightly. CW2 Nield also tried, but even with both pilots pulling together, the control would not move.

Without effective thrust control, CW3 Lewis used cyclic control to flare, and the aircraft touched down on the aft gear. After a ground roll of only 30 feet, the forward gear settled and the aircraft touched down without further damage.

CW2 Nield directed the flight engineer to check for fire and then

performed emergency shutdown procedures. After the engines were secured and the rotor system began to slow down, a deafening sound filled the helicopter as the aft rotor blades struck the top of the fuselage, cutting through the hydraulic lines and flight controls. The crew immediately assumed as low a profile as they could, waiting for the blades to stop. Eventually the rotor blades came to a stop, and the crew was able to exit safely.

Lapsed time from onset of emergency to termination was less than one minute.

Note: See the May 1998 Issue of *Flightfax* for first-person accounts of this accident by both pilots, the flight engineer, and the crew chief.

■ CW2 Michael T. Senyczko Army Aviation Support Facility, MI ARNG, Grand Ledge, MI

CW2 Senyczko was in the back seat of an AH-1F on the second leg of a cross-country ferry flight. They were flying unaided at night with zero illumination. The terrain below was rolling and wooded with residential housing adjacent to an interstate highway, where moderate traffic was moving at 65 mph. Highway signs were located along the road, and high-tension wires crossed the road at every-other exit ramp.

The Cobra was at 1300 feet agl in cruise flight at a moderate power setting when the engine chip detector and master caution lights came on. CW2 Senyczko immediately advised the PC that the best forced landing area was a nearby highway, with the nearest airport being about 4 miles away. Fearing that the engine would fail before he could reach the airport, the PC initiated a clearing turn toward the highway. CW2 Senyczko announced that he would handle air traffic control while the PC flew the aircraft as prebriefed.

About 10 to 15 seconds after

the chip light illuminated, the PC felt a yaw and heard sharp reports from the engine area. Suspecting a compressor stall, he reduced power and maneuvered the aircraft for landing to the highway. CW2 Senyczko cleared the aircraft and continued communication with approach control, who was now directing a medevac aircraft to their location.

During the prelanding check, the crew discovered that the landing light fixed to the skid had shifted during flight and was now pointing up toward the main-rotor blades. Five to ten seconds after the first compressor stall, the aircraft yawed again, accompanied by more sharp reports followed by total engine failure. CW2 Senyczko cleared the aircraft as the PC entered autorotation and continued the turn to land with the flow of traffic.

CW2 Senyczko set the transponder to emergency and declared an emergency with approach control while continuing to provide verbal guidance regarding obstacle identification and avoidance. The PC maintained airspeed at 70 knots until touchdown so as to better merge with traffic. As the aircraft skidded down the highway, he slid left to keep the right lane free for traffic. His high touchdown speed and the askew landing light helped avoid an aircraft-automobile collision.

CW2 Senyczko continued his communication with approach control throughout the emergency, then dialed 911 on his cellular phone to advise local authorities of the situation and their location.

Time from onset of the emergency to landing without damage or injury was less than 90 seconds.

Note: The pilot in command, CW4 Dennis P. Hallada, also received the Broken Wing Award for his performance during this emergency (see Apr 98 *Flightfax*).



Leadership vs. management: Some food for thought

FM 22-100 defines *leadership* as "the process of influencing others to accomplish the mission by providing purpose, direction, and motivation." Webster's defines *management* as "the act, art, or manner of handling, controlling, or directing."

Let's not miss the important difference here: Through motivation, leadership *inspires* performance; through control, management *mandates* it.

THE CORPORATE APPROACH

Over the years, constant attrition of resources—especially of experienced personnel—has systematically molded the character of the Army's everyday operations to follow a more corporate approach. In many cases, this has slowly but surely allowed "management" to displace "leadership." As aviators and crewmembers, we need to be aware that this can have a tangible and very serious impact upon the safe conduct of our mission. We need to understand what has changed and how those changes have placed new demands upon our individual responsibilities.

In the Real Army of today, values have shifted: the "process," in many instances, has become far more important than the results it was intended to achieve. For example, during my recent Bosnia tour, notification of genuine emergency medevac missions first mobilized an administrative team dedicated to recording times and summaries of significant events. Some teammates worked on large presentation easels for one after-action briefing, while others feverishly transferred the information into a series of PowerPoint slides for another briefing to be held at a higher level. Often, important minutes ticked painfully by as aircraft running at full rpm waited for a higher-echelon, nonaviation commander to be located and briefed so "launch authority" might be granted (and the precise time recorded).

For commanders, "control" is—and has always been—a primary objective; however, management has lately replaced leadership as the dominant means of achieving it. "Effective leadership" is now often judged—and leaders rated—by how completely and how intensively control is exerted.

"FLATLINING"

Flatlining (elimination of as many variables as possible, personally managing details down to the lowest possible level, ensuring everything unfolds as precisely and predictably as planned to provide the next higher commander with a smooth, flawless after-action briefing) seems to have become an unofficial cornerstone of many real-world Army operations. While the commander-as-flatliner might serve well when, say, meticulously managing supply statistics, it can

be a radically different story when applied to aviation. Despite this, it happens—and happens often.

Imagine this: Worried about higher headquarters tracking the number of deficiencies on unit aircraft, a commander personally examines every logbook and demands a justification for each write-up from the crew chief. He or she then imposes a "solution" that results in restating, interpreting, waiving, or eliminating the deficiencies such that the statistics "improve" without, in some cases, any work being done to the aircraft. Would this be "effective management" (i.e., systematic evaluation to bring documentation into line with regulations and perhaps produce a more accurate picture)? Very likely. But how many crew chiefs waiting with logbooks decide to distort that picture by understating problems to avoid being harangued? And how many subsequently hold off reporting discrepancies they know might bring unwanted attention?

UNNECESSARY STRESS

Imagine this: During real-world operations, the commander assails a pilot-in-command during the daily flight operations briefing for reporting the actual number of hours of sleep he got the previous night. Why? The real number would drive up the numerical value of the mission risk assessment and call attention to the statistic. In front of his colleagues, the aviator receives serious rebuke from his commander (and senior rater) for telling the truth in a document designed to provide a realistic evaluation of life-critical risk. The PC, an IP and highly experienced aviator, grudgingly revises upward the number of hours he slept.

Stress? What would you have done? What might you do the next time? Be honest, now.

An important bottom line is that, once through translational lift, aviators enter an environment where the certainty of physics displaces even the most fashionable management model. Demands in this environment never change, and neither must the aviator. Aviation is very likely the most unforgiving of human activities, and this is especially true as aircraft and systems have grown increasingly powerful and complex. In today's more "corporate" atmosphere, the requirement for aviators and other crewmembers to realistically assess and deal with their environment has never been greater.

"TEAM PLAYING"

In three decades as an Army aviator, I've served under a lot of commanders and observed a myriad of leadership—and management—styles. More and more in today's Army, I'm seeing that commander-managers are increasingly likely to believe that just because someone has passed the checkride, they're "good to go." Seemingly far more important to some commanders than flying ability nowadays is how individual aviators couple with nonaviation goals; i.e., is this person a "team player?" With the decrease in flying hours and actual aviation activities, emphasis appears to have shifted to additional duties and how compliant and productive an individual might be relative to the constantly changing requirements of everyday administration. This encourages the "Well, if you can't do it, I'll just get someone who can" syndrome.



Imagine this: Higher has requested that two aircraft launch to a remote base late at night and in bad weather. It's not an emergency, and en route conditions are reported below minimums. Crews openly resist attempting it while, pressured from above, the commander and the next higher echelon insist they go. Meanwhile, similar pressure is applied to the weather forecaster as an O-5 personally requests that the forecaster make a "special observation." Finally, as the new, bare-minimum special observation arrives, the commander substitutes the unit SP for the PC who's been most vocal about the obvious hazards. At the same time, the commander decides to personally take the place of a far more experienced PI on the second crew since that PC is a proven "team player." All this unfolds amid bitter argument in Flight Operations and in front of most unit aviators. The mission launches, encounters the previously reported below-minimum conditions at the halfway point, and has to "feel" its way back.

Though what I've described isn't supposed to happen, it has happened and continues to occur. However, Army aviators and other crewmembers have a genuine responsibility to maintain a clear and unmistakable sense of personal integrity, identity, and sovereignty, despite attempts at flatlining anywhere in the

command chain. Aviators, as distinct from most other line officers, face a unique and unyielding requirement to address and quickly deal with situations whose edges are at best ill-defined and where the penalty for incorrect assessment can be deadly.

SUMMARY

As leadership has deteriorated into management, the climate has grown increasingly hostile to individuality and calculated risk-taking, replacing it with structured review and carefully controlled response, perhaps imposing risks that might be wholly unnecessary. Statistically, this approach might prove cost-effective in some broader sense, but, in aviation, situational demands and immediacy make it unrealistic. What will ultimately show itself most productive is still uncertain; learning and change go hand-in-hand, but neither happen overnight.

In the meantime, as Army aviators and crewmembers, we must discipline ourselves to retain our individuality and independent thought processes that form the foundation of effective risk management. We must be prepared to make informed decisions and stick by them.

This is nothing new. More than 50 years ago, General George S. Patton summarized it well: "When everyone is thinking alike, no one is thinking."

—CW4 David Rosenthal, 126th Medical Company (AA), DSN 437-6401 [760-939-6401], n6tst@ridgenet.net

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH1



Class E F series

■ While hovering to park following limited maintenance test flight, engine oil bypass light came on. Aircraft was landed and emergency shutdown performed. Inspection revealed that broken O-ring in ODDS chip plug had allowed more than 4 quarts of engine oil to leak out.

■ At end of hot refueling operation, refuelers shut pump off at truck. When refueler removed nozzle from aircraft, fuel under hose pressure sprayed on aircraft. Dead-man valve and emergency shutoff were closed, and pilot performed emergency shutdown. Ground personnel applied water to aircraft and refueler. Inspection found that pin inside nozzle had broken off, preventing nozzle from shutting off. About 5 gallons of JP-4 spilled.

■ During flight, both pilot and gunner's N1 gauges became erratic. No other indications were noted. Caused by failure of N1 tachometer generator.

■ Master caution and No. 1 hydraulic pressure caution lights came on in cruise flight at 200 feet agl and 100 knots during training mission to exercise operational float. Aircraft was flown to nearby airfield, where shallow approach and landing were made without incident. Caused by defective switch.

AH64



Class A A series

■ Aircraft crashed during night training flight. Both crewmembers were killed. Investigation is under way.

Class B A series

■ Aircraft was hovering at 150 feet agl in battle position during night battle drill. Aircraft settled and blade tips came into contact with tree. Crew was not injured.

■ Maintenance personnel discovered damage to all tail- and main-rotor blades and stabilator. Aircraft had last been flown the evening before for unit deep-attack training.

Class E A series

■ After 1 hour night flight, aircraft was landed to refuel. Fuel handlers noticed that both tail-rotor driveshaft covers were unsecured. Aircraft was shut down, and damage was found on aft driveshaft cover.

■ APU failed during normal ground operation, resulting in hard shutdown. Troubleshooting revealed that No. 2 generator was throwing sparks out of inboard side. APU was 100 percent, but generators were off line. Generator was replaced.

■ While hovering to land, oil bypass utility caution light came on. Aircraft was taxied to parking. Troubleshooting revealed utility manifold was defective.

■ Aircraft was refueling in FARP with No. 2 engine power lever off and No. 1 engine power lever at fly. When aft fuel cell was full, fuel crossfeed switch was placed in aft position in preparation for filling forward fuel cell. Amber crossfeed caution light came on, indicating that No. 1 engine fuel crossfeed shutoff valve had not rotated to correct position, but pilot failed to recognize condition in time to prevent No. 1 engine from flaming out. Aircraft was shut down without further incident. No. 1 engine crossfeed shutoff valve was replaced.

■ No. 1 engine would not start. Maintenance removed starter and found that starter shaft was sheared. Starter and starter valve were replaced, and QDR was submitted.

CH47



Class C D series

■ No. 2 engine transmission hot light came on during vibration check, followed by combining engine hot light. Damage was confirmed to nose and combining gearboxes.

Class E D series

■ Aft cargo hook open caution light came on during hover power check with M198 in tandem configuration. Load was set down, and crew attempted to manually reset hook.

Caution capsule illuminated during second attempt, and external load portion of mission was terminated. Maintenance replaced aft hook.

■ Aircrew was performing amphibious operations when crew chief announced hydraulic fluid was leaking from flight-control closet. PC announced to abort maneuver and depart for landing area. PI began climb and, at 40 feet agl and 10 KIAS, No. 1 hydraulic flight-control light came on with No. 1 AFCS light. Aircraft then entered uncommanded 25-degree nose-down attitude. PC recovered aircraft and landed without further incident. Maintenance replaced failed packing.

■ Aircraft made uncommanded right-pedal yaw during hover. Aircraft landed without incident. Maintenance could not duplicate during test flight.

■ While passing through 60 KIAS during instrument takeoff, aircraft started to vibrate. As airspeed increased to 80 KIAS, vibration became severe. Aircraft landed without incident. Postflight inspection revealed that red forward rotor blade was separating.

■ During cruise flight, IP initiated simulated engine failure by decreasing emergency engine trim. Engine failed to stabilize, and N1 fell to zero. Aircraft landed safely. Maintenance replaced bleed actuator.

OH6



Class C J series

■ Tail boom contacted ground during landing. Aircraft sustained damage to two tail-rotor blades, tail-rotor gearbox and driveshaft, vertical stabilizer, and tail stinger.

OH58



Class A D series

■ Engine-out audio activated at 400 feet AHO and 80 KIAS, followed by low-rotor audio. Crew initiated autorotation, lowering collective before aircraft descended to ground impact.

Skids spread and right skid reportedly caught, after which aircraft rolled onto its right side with the blades still turning. Crew was able to egress with only minor injuries through front windscreen.

Class C D series

■ Aircraft encountered birds as IP was demonstrating antitorque maneuver. As IP attempted to avoid bird strike, mast torque limit light came on and engine torque reading reached 122 percent. Aircraft was hovered to parking and shut down without further incident. Regulatory limit for engine torque is 121.6 percent. Extent of engine damage has yet to be determined.

■ Crew noted engine torque reading of 125 (limit is 121.6) percent during power recovery from standard autorotation at 15 to 20 feet agl. Extent of engine damage has yet to be determined.

Class E C series

■ During simulated antitorque (fixed right pedal), aircraft touched down aligned with runway. During ground slide, wind (gusts to 35 knots) pushed aircraft to left toward taxiway light. IP initiated brief cyclic climb to get over light; however, right skid hit and broke light. Aircraft continued to slide off runway about 50 feet. No aircraft damage was found.

D series

■ As aircraft descended into canyon, wind gust from behind aircraft caused increased rate of descent. To prevent landing on Chalk 1, pilot performed go-around, which demanded more power to climb out above ridgeline. Aircraft overtorqued. Inspection revealed no damage.

■ Engine oil pressure oil low caution light and audio activated during cruise flight. Crew executed precautionary landing to unimproved field site without incident. Maintenance inspection determined that the manufacturer had incorrectly assembled a seal in the engine, resulting in internal engine oil leak. Engine will be replaced; QDR was submitted.

■ During MOC for tail rotor at 0 KIAS and 3 feet agl, system indicated high engine oil pressure. Crew landed without incident. Caused by faulty pressure transducer.

■ During runup for multiship

mission, FADEC degrade (droop) advisory message appeared. Pilot aborted mission and began shutdown procedures. When he closed throttle, there was no response from engine. He then pulled fuel valve handle to starve engine of fuel and finished shutdown procedures. As engine began to wind down, pilot received FADEC fail warning message. Cause not reported.

UH1



Class E H series

■ Rotor and engine rpm light and audio came on in cruise flight. With engine rpm at 5680 and rotor rpm at 280, pilot lowered collective to regain rotor rpm and performed emergency governor operations to recover engine rpm. Engine overspeed (6950 rpm) during short final lasted 5 seconds. Aircraft landed in horse corral without incident.

■ En route to field landing site after picking up three passengers at civilian airport, engine tach indicator malfunctioned. Caused by broken shaft on N2 latch indicator.

UH60



Class D A series

■ Infantry soldier inadvertently jettisoned cargo windows on left side of aircraft during offloading. Missing windows were not discovered until return to PZ.

■ Tail-rotor de-ice cable separated, then shed its insulation. Insulation hit top of stabilator, causing skin damage.

Class E A series

■ During cruise flight, left antitorque pedal moved 1 inch forward without pilot input. This was followed by flight path stabilization system and gyro system failure advisory lights. After resetting automatic flight control system computer, electrical odor and smoke filled cockpit. Computer was shut off and aircraft landed without further incident. AFCS computer was replaced.

■ During shutdown after test flight for fluctuating tgt on No. 1 engine, No. 2 engine failed while retarding power lever to idle. Cause not determined.

■ While on ground with engines running, No. 2 engine failed when No. 1 engine was placed in ECU lockout. Aircraft was shut down without further incident. Maintenance replaced No. 2 engine pressurizing and overspeed unit.

L series

■ During shutdown after IFR flight, APU would not start. Several attempts were made to manually start the APU without success. With No. 1 engine at idle and No. 2 at fly, battery and generator power were removed and then reset. At this point, No. 1 engine flamed out. Maintenance investigated incident and determined that fuel starvation had occurred. O-ring packing around No. 1 main fuel tank breakaway valve disintegrated, allowing air into the fuel system and resulting in engine flameout.

C12



Class E D series

■ During taxi, right pedal was displaced 6 inches forward of left pedal to maintain centerline. Maintenance inspection revealed faulty link assembly, which was replaced.

F series

■ While leveling at FL200 in IMC, CP windshield cracked at lower left center area. Seconds later, external cracks spread to finally cover three-quarters of the surface area.

■ While moving power levers from flight idle to max available during demonstration of a stall "clean configuration" maneuver, what was believed to be a compressor stall occurred between 400 and 600 pounds of torque. Crew discontinued mission and returned to airfield. Caused by inoperative low bleed air valve on No. 2 engine.

J series

■ After landing, aircraft would not respond to rudder pedal steering input due to failure of nose wheel steering actuator. Aircraft was safely taxied to parking by using differential braking and power. Actuator was cleared and lubed, and aircraft released for flight.

For more information on selected accident briefs, call DSN 558-2785 (334-255-2785). Note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change.

Aviation messages

Recap of selected aviation safety messages

Aviation safety-action messages

AH-64-99-ASAM-05, 121843Z May 99, maintenance mandatory

Investigation of a fire in the APU area revealed the need for additional installation, inspection, and servicing procedures for the PTO clutch. This message outlines the new requirements and procedures.

AMCOM contact: Mr. Howard Chilton, DSN 897-2068 (256-313-2068), howard.chilton@redstone.army.mil

AH-64-99-ASAM-06, 121910Z May 99, maintenance mandatory

A main rotor retention nut was recently found to be cracked. Failure of this nut was attributed to stress corrosion cracking. The purpose of this message is to direct initial and recurring inspections of AH-64 main-rotor retention nuts.

AMCOM contact: Mr. Howard Chilton, DSN 897-2068 (256-313-2068), howard.chilton@redstone.army.mil

OH-58-99-ASAM-06, 171323Z May 99, maintenance mandatory

Some Allied Signal (Bendix) fuel control units may contain springs that have manufacturing damage. Failure of these springs will result in immediate engine deceleration.

This message requires inspection of all fuel controls to identify those that require repair.

AMCOM contact: Mr. Ron Price, DSN 788-8636 (256-842-8636), ron.price@redstone.army.mil

OH-58-99-ASAM-07, 271156Z May 99, maintenance mandatory

Message OH-58-99-ASAM-05 required removal of tail-rotor driveshaft bearing hanger supports for nondestructive inspection (NDI). This message revises the NDI procedures outlined in the previous message.

AMCOM contact: Mr. Ron Price, DSN 788-8636 (256-842-8636), ron.price@redstone.army.mil

Safety-of-flight messages

UH-1-99-SOF-02, 071815Z May 99, emergency

A recent UH-1V accident involved in-flight separation of the tail boom vertical fin. It is suspected that the vertical fin spar assembly failed due to metal fatigue.

This message grounds the Army's fleet of UH-1s until each helicopter's vertical tail fin spar assembly can be inspected in accordance with approved procedures, which will be published in a follow-on SOF message.

AMCOM contact: Mr. Robert Brock, DSN 788-8632 (256-842-8632), bob.brock@redstone.army.mil

UH-1-99-SOF-03, 281815Z May 99, technical

The purpose of this message is to require mandatory initial and recurring inspections of the vertical fin spar assembly for cracks. Inspection procedures have been provided to all Logistics Assistance Representatives (LARs) and ARNG AVCRADs. Fax and e-mail will be used to provide these instructions to units that do not have access to a LAR. Procedures will also be available in TB 1-1520-210-30-1 and on the utility-helicopter web page.

AMCOM contact: Mr. Robert Brock, DSN 788-8632 (256-842-8632), bob.brock@redstone.army.mil



Speed ♂
Fatigue ♂
No seatbelt ♂

No new causes, **FY98 FY99**
just new victims **79 86**

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Class A Accidents through May

| | | Class A Flight Accidents | | Army Military Fatalities | |
|---------|-----------|--------------------------------|----|--------------------------------|----|
| | | 98 | 99 | 98 | 99 |
| 1ST QTR | October | 2 | 1 | 0 | 0 |
| | November | 1 | 1 | 0 | 2 |
| | December | 2 | 1 | 2 | 0 |
| 2ND QTR | January | 1 | 1 | 0 | 0 |
| | February | 1 | 4 | 0 | 2 |
| | March | 1 | 0 | 0 | 0 |
| 3RD QTR | April | 0 | 2 | 0 | 7 |
| | May | 1 | 3 | 0 | 2 |
| | June | 2 | | 4 | |
| 4TH QTR | July | 1 | | 0 | |
| | August | 0 | | 0 | |
| | September | 0 | | 0 | |
| TOTAL | | 12 | 13 | 6 | 13 |



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